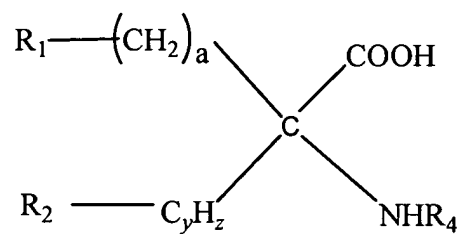


## Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

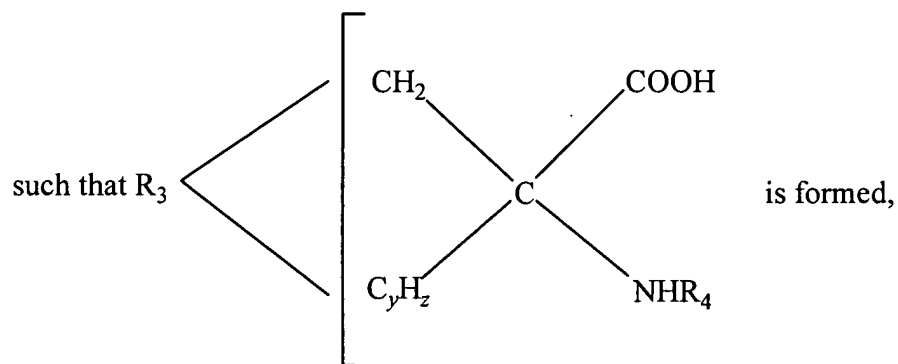
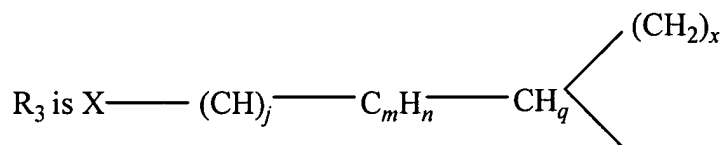
## Listing of Claims:

1. (Original) An amino acid analog having the general structure



where  $\text{R}_1$  is X,  $\text{X} - \text{HC} = \text{CH} -$ , or  $\text{R}_3$

$\text{R}_2$  is H, or  $\text{R}_3$  if  $\text{R}_1$  is  $\text{R}_3$ .



$\text{R}_4$  is  $-(\text{C}_k\text{H}_{2k+1})$ ,  $-(\text{C}_k\text{H}_{2k-1})$  or  $-(\text{C}_k\text{H}_{2k-3})$

And where  $a$  is 1 to 5,

$x$  is 0 or 1,

y is 1 or 2,  
z is 1, 2, 3 or 4 and  $z > y$  if y is 2,  
q is 1 or 0 if n is 1 and j is 0,  
n is 1 or 2, but 0 if m is 0,  
m is 0 or 1  
j is 0, 1, 2 or 3  
k is 1-5 and  
X is  $^{18}\text{F}$ ,  $^{123}\text{I}$ ,  $^{124}\text{I}$ ,  $^{125}\text{I}$ ,  $^{131}\text{I}$ ,  $^{75}\text{Br}$ ,  $^{76}\text{Br}$ ,  $^{77}\text{Br}$ ,  $^{82}\text{Br}$ , or At

2. (Original) The compound of claim 1, wherein  $R_1$  and  $R_2$  are  $R_3$ .
3. (Original) The compound of claim 1, wherein x is 0  
y is 1  
z is 2  
q is 1  
m is 0 and j is 0.
4. (Original) The compound of Claim 3, wherein X is  $^{18}\text{F}$  or  $^{123}\text{I}$ .
5. (Original) The compound of Claim 3, wherein X is  $^{18}\text{F}$ .
6. (Original) The compound of Claim 1, wherein  $R_1$  and  $R_2$  are  $R_3$ ,  
x is 0 or 1  
y is 2  
z is 4  
q is 1  
m and j are 0 and X is  $^{18}\text{F}$  or  $^{123}\text{I}$ .
7. (Original) The compound of claim 6, wherein x is 1 and X is  $^{18}\text{F}$ .
8. (Original) The compound of Claim 6, wherein x is 0 and X is  $^{123}\text{I}$ .

9. (Original) The compound of Claim 6, wherein x is 1 and X is  $^{123}\text{I}$ .
10. (Original) The compound of Claim 1, wherein R1 and R2 are R3,  
x is 0  
y is 1  
z is 2  
q is 0  
m is 1  
n is 1  
j is 0 and X is  $^{18}\text{F}$  or  $^{123}\text{I}$ .
11. (Original) The compound of claim 10, wherein X is  $^{18}\text{F}$ .
12. (Original) A compound according to claim 1 wherein R<sub>1</sub> and R<sub>2</sub> are R<sub>3</sub>,  
x is 1  
y is 1  
z is 1  
q is 0  
m and j are 0, and  
X is  $^{18}\text{F}$  or  $^{123}\text{I}$ .
13. (Original) A compound according to claim 12 wherein X is  $^{123}\text{I}$ .
14. (Original) A compound according to claim 1 wherein R1 and R2 are R3,  
x is 0  
y is 1  
z is 2  
q is 1  
m is 1  
n is 1

j is 1, and  
X is <sup>18</sup>F, or <sup>123</sup>I.

15. (Original) The compound of claim 14 wherein X is <sup>123</sup>I.

16. (Original) A compound according to claim 1 wherein R<sub>1</sub> and R<sub>2</sub> are R<sub>3</sub>,  
x is 0  
y is 1  
z is 2  
q is 0  
m is 0  
j is 1, and  
X is <sup>18</sup>F, or <sup>123</sup>I.

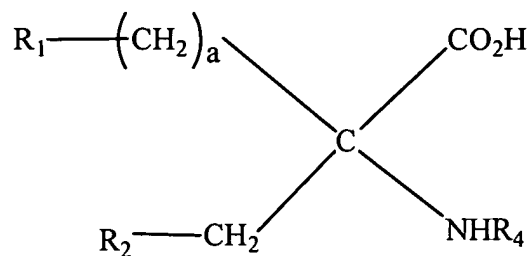
17. (Original) The compound of claim 16 wherein X is <sup>123</sup>I.

18. (Original) A compound according to claim 1 wherein R<sub>1</sub> and R<sub>2</sub> are R<sub>3</sub>,  
x is 0 or 1  
y is 2  
z is 4  
q is 1  
m is 1  
n is 1  
j is 1, and  
X is <sup>18</sup>F, or <sup>123</sup>I.

19. (Original) The compound of claim 18 wherein X is <sup>18</sup>F.

20. (Original) The compound of claim 18 wherein X is <sup>123</sup>I.

21. (Original) A compound according to claim 1, wherein  $R_1$  and  $R_2$  are  $R_3$ ,  
x is 0 or 1  
y is 2  
z is 4  
q is 0  
m is 0  
j is 1, and  
X is  $^{18}\text{F}$ , or  $^{123}\text{I}$ .
22. (Original) The compound of claim 21 wherein X is  $^{18}\text{F}$ .
23. (Original) The compound of claim 21 wherein X is  $^{123}\text{I}$ .
24. (Original) A compound of claim 1 wherein  $R_1$  and  $R_2$  are not  $R_3$ .
25. (Original) A compound according to claim 24 wherein X is  $^{18}\text{F}$ .
26. (Original) A compound according to claim 1 wherein  $R_1$  is  $\text{X}-\text{CH}=\text{CH}-$ ,  
 $R_2$  is H, y is 1 and z is 2.
27. (Original) The compound of claim 26 wherein X is  $^{123}\text{I}$ .
- 28-44. (Canceled)
45. (Original) The compound of claim 1, wherein  $R_1$  is  $^{18}\text{F}$ ,  $R_2$  is H, y is 1, z is 2,  
and  $R_4$  is  $-\text{CH}_3$ .
46. (Currently amended) An amino acid analog having the general structure



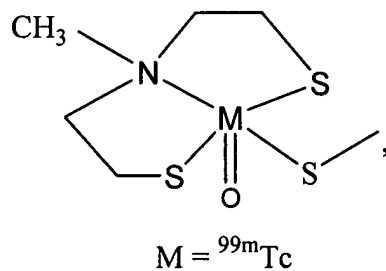
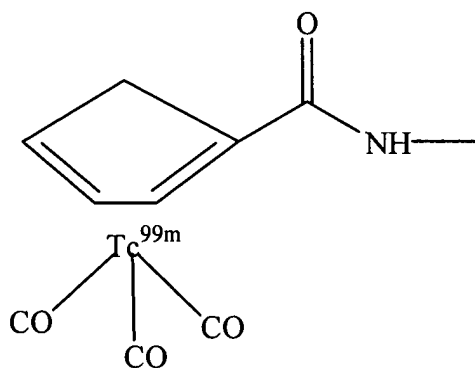
where  $\text{R}_1$  is Z, a is 1 to 5,

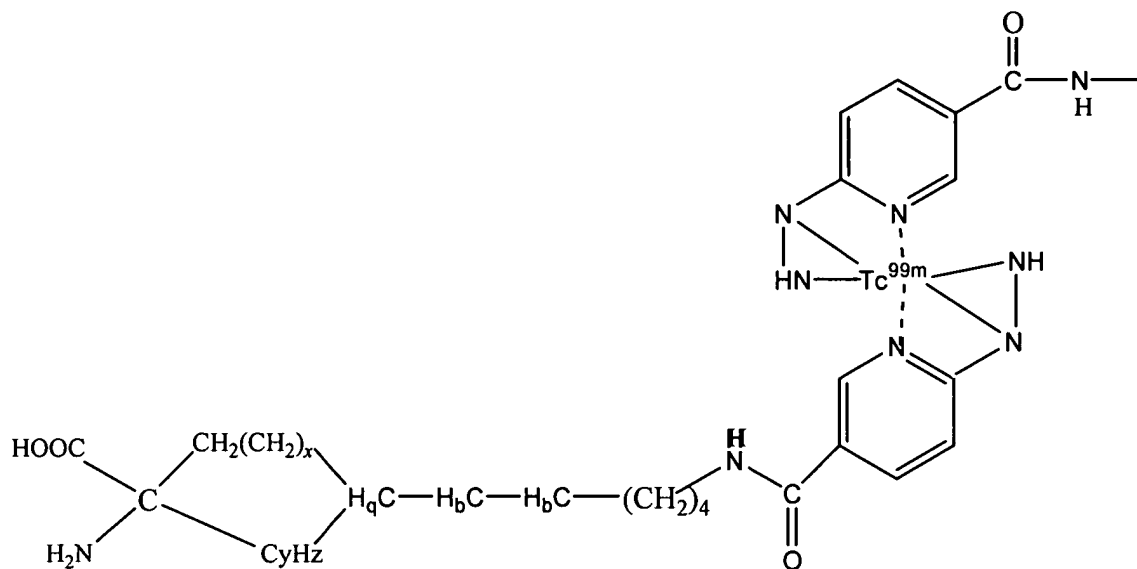
$\text{R}_4$  is  $-(\text{C}_k\text{H}_{2k+1})$ ,  $-(\text{C}_k\text{H}_{2k-1})$ , or  $-(\text{C}_k\text{H}_{2k-3})$ , and

$\text{R}_2$  is  $-(\text{C}_k\text{H}_{2k+1})$ ,  $-(\text{C}_k\text{H}_{2k-1})$ , or  $-(\text{C}_k\text{H}_{2k-3})$

k is 1-5.

Z is





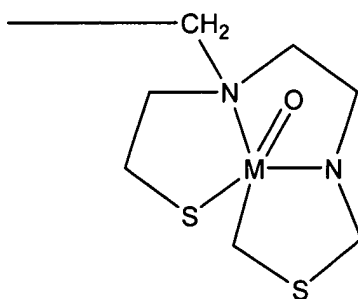
where b is 0, 1 or 2

x is 0 or 1

y is 1 or 2

z is 1, 2, 3, or 4 and  $x \geq y \geq z$  if y is 2,

q is 0 or 1

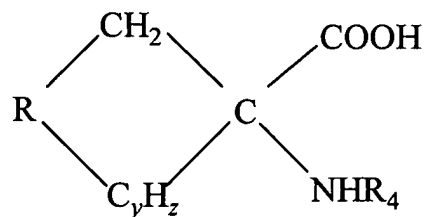


M = Tc or Re

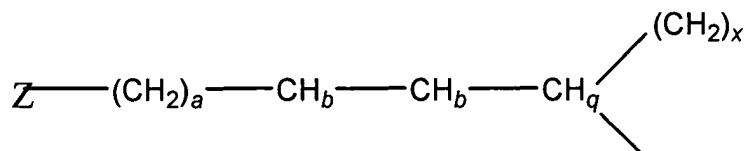
47. (Original) A method of in situ tumor imaging by positron emission tomography comprising:

administering to a subject suspected of having a tumor an image-generating amount of a compound according to claim 1, and measuring the distribution of the compound in the subject by positron emission tomography.

48. (New) An amino acid analog having the general structure



where R is



where a is 1, 2 or 3

b is 0, 1 or 2

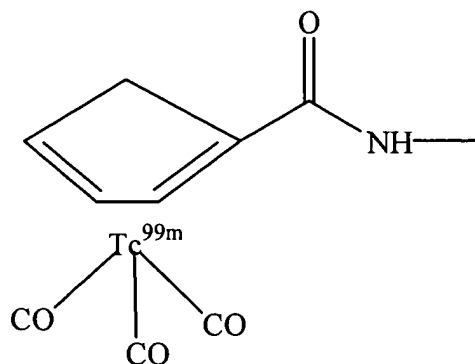
x is 0 or 1

y is 1 or 2

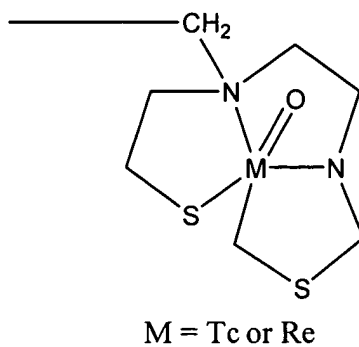
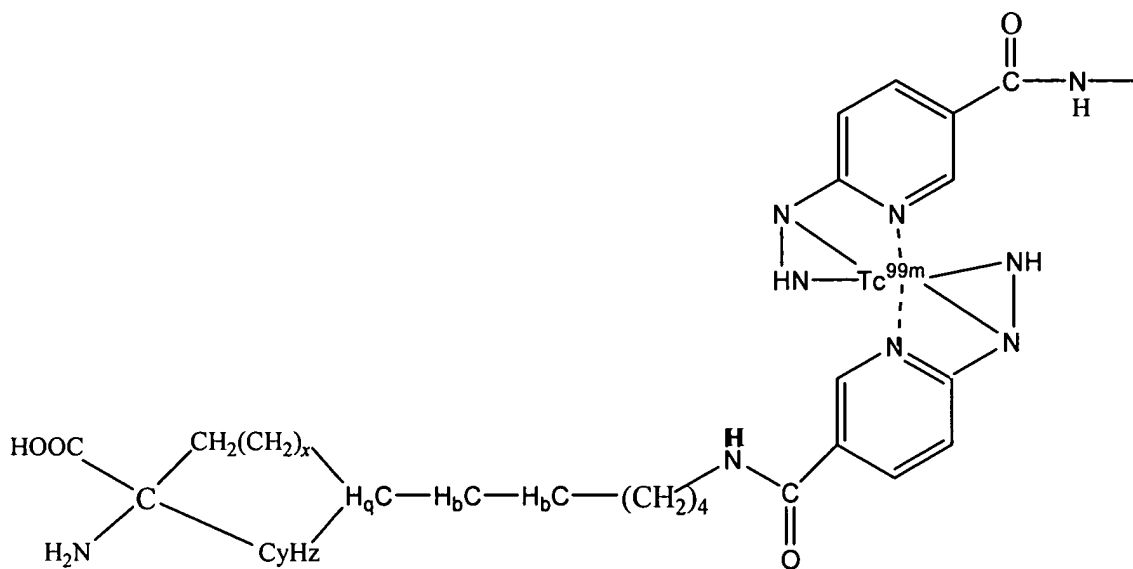
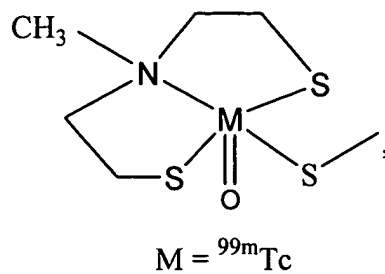
z is 1, 2, 3 or 4 and  $z > y$  if y is 2,

q is 1 or 0

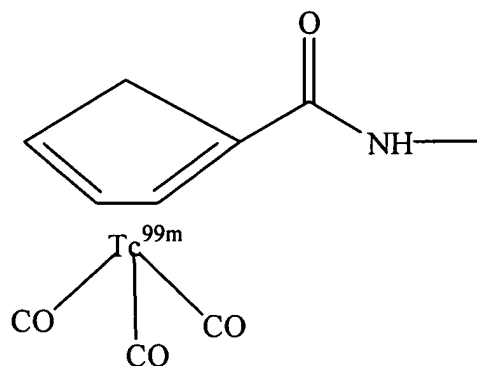
$R_4$  is  $-(C_kH_{2k+1})$ ,  $-(C_kH_{2k-1})$ , or  $-(C_kH_{2k-3})$ , where k is 1-5, and Z is



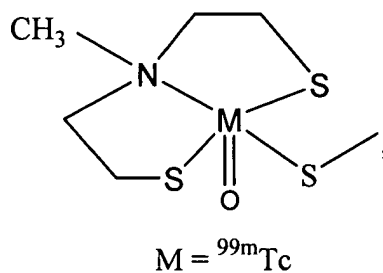




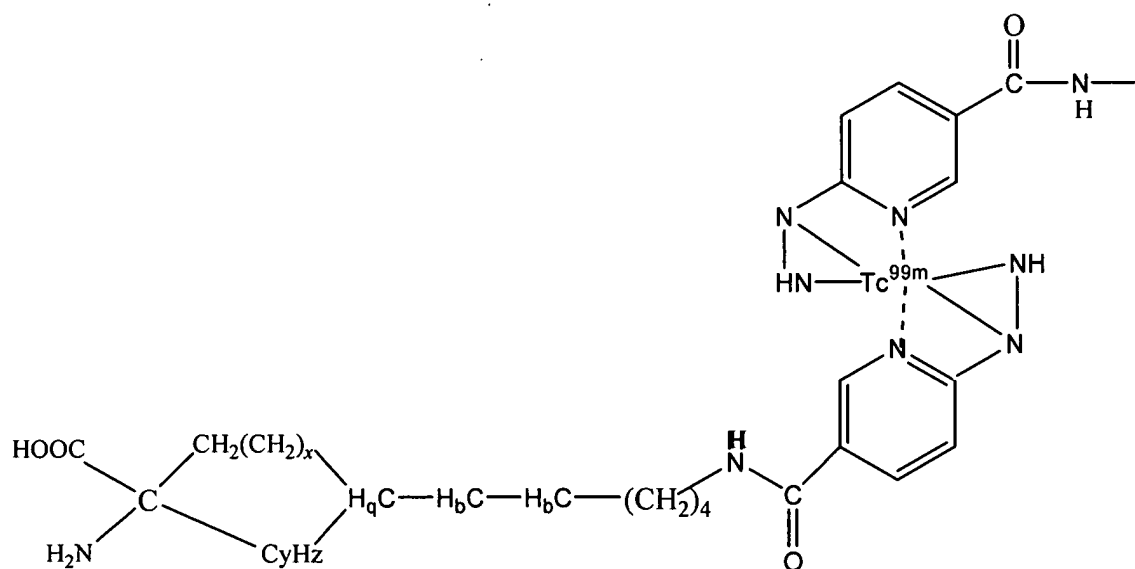
49. (New) The compound of claim 48 wherein Z is



50. (New) The compound of claim 48 wherein Z is



51. (New) The compound of claim 48 wherein Z is



where a is 1, 2 or 3

b is 0, 1 or 2

x is 0 or 1

y is 1 or 2

z is 1, 2, 3 or 4 and  $z > y$  if y is 2,

q is 1 or 0

52. (New) The compound of claim 48 wherein Z is

